

MECHANICAL ASSIST HIGH DENSITY MOBILE SHELVING SYSTEMS

GENERAL

Scope:

Furnish, deliver, and install a Mechanical Assist High Density Mobile Shelving System as specified.

Installation Location:

State of Tennessee—Department of Health—Office of Vital Records

Bidder shall determine and supply all components and hardware plus any and all parts required for a complete, functional, stable installation suitable for intended use whether specifically noted or not.

Damage to walls, woodwork, ceiling material, carpet, etc., shall be the responsibility of the successful bidder.

The successful bidder shall clean up and remove all debris from the premises after the job is completed. The successful bidder shall see to it that all components and surfaces are left in good order, clean and properly installed.

The successful bidder is required to visit the site to field verify dimensions and site conditions prior to fabrication of the mobile shelving system.

Successful Bidder will coordinate all shelving system installation activities with project manager.

Successful Bidder will include in bid price all shipping, delivery and freight charges as stated in item # 7 of Bidder Requirements.

Standard of Quality:

It is the intent of the owner to receive bids from all qualified Mechanical Assist High Density Mobile Shelving System manufacturers.

Whenever brand name specifications or catalog numbers are used to describe the standard of quality, performance and other characteristics to meet the owner's requirements, the use of such specifications shall not restrict bidders to a specific brand, make or manufacturer. Bidders shall submit items of equivalent or greater quality a minimum of ten (10) days prior to the bid date for prior approval. Each such request shall include the name of the item for which it is to be substituted and a complete description of the proposed substitute, including cut sheets, performance data and any other information necessary for evaluation. The burden of proof of the merit of the proposed substitute is upon the proposer. Tennessee Department of Health's decision of approval or disapproval of a proposed substitute shall be final.

If the Tennessee Department of Health approves any substitutions prior to receipt of bids, such approval shall be set forth in an Addendum. Bidders shall not rely upon approval made in any other manner. The bid documents and equipment list define the essential requirements as to the quality of

materials, hardware, finish, construction, design, function, and overall workmanship of the equipment.

The owner is especially concerned with seeing that the function remains as has been planned. Any deviation changing the function, use, or capacity of this equipment will not be acceptable. Failure to disclose **any** deviation from the bid specifications shall result in the disqualification of the bid.

The owner reserves the right to reject a bid if it does not meet the standard of quality, function, or essential requirements established by this bid specification.

Manufacturers:

Approved manufacturers: Subject to specifications being met, provide products manufactured by one of the following:

- a. Aurora Storage Products
- b. Borroughs Corporation
- c. Spacesaver Corporation
- d. Montel
- e. Or approved equal

All bid specifications must be met, even if manufacturer is listed as prior approved.

Required of All Bidders:

The following shall be required and submitted with bid proposal. Omission of any of the following items shall render the bid proposal non-responsive and immediately eliminated without further consideration:

1. Written verification and documentation of manufacturer's representative.
2. Written verification of proposers' three (3) comparable installations along with agency name, contact, and address of installation.
3. Written verification and documentation of local service and service response time.
4. Manufacturer's original and non-edited Warranty Document
5. Manufacturer's original and non-edited Specifications
6. Itemized Components List
7. All shipping, delivery and freight charges shall be included in the bid price submitted.

Defective Parts:

Defective or damaged parts which cannot be restored to factory-finished conditions and appearance shall be replaced.

Completion:

Upon completion, Contractor shall make an inspection and warrant, in writing, that the systems are properly installed and ready for use. Then contractor shall instruct department personnel in proper operation and maintenance of the systems.

Warranty:

Warranty for a minimum of five (5) years shall be provided that expressly warrants that the product shall be free from defects in material and workmanship from date of substantial completion.

Submittals:

Successful bidder shall furnish shop, setting and erection drawings with color cards, charts and chips required for color selection by the owner.

Expectations:

Successful bidder's mobile storage system shall perform the following:

Births: Completely house 18 years of records (754 boxes) while providing for 6 years of growth. **(108 boxes).**

Deaths: Completely house existing boxes. **(1700 count).**

Sealed Records: Completely house existing sealed records **(27,720 lfi)**, while providing for a minimum of **2500 lfi** growth.

Indexes: Completely house existing bound index books.

PRODUCTS/DESIGN DETAILS

1. Track

1.1 Track shall be constructed of solid steel with a minimum 5/8" surface width. Top of track shall be flush with and not extend above the finished floor covering.

1.2 All track connection joints shall be designed to provide some form of track section interconnection to provide horizontal and vertical continuity between track sections, to gradually transfer the concentrated wheel point load to and from adjoining track sections and to prevent track separation.

1.3 Where stationary platforms end in an open area, a track skirt shall be installed to cover the gap created from the slab floor to the top of the track and elevated deck.

1.4 All tracks are to be securely fastened to the floor and grouted the entire length of the tracks to assure uniform load transmission to the floor, total rail support, and to minimize deflection.

2. Elevated Deck System:

2.1 An elevated deck shall be installed beneath the entire range length and between the track housings. Elevated deck shall be constructed of 3/4" plywood.

2.2 A ramp of the same material as the elevated deck shall be provided at the front of the assembly to allow for a smooth transition from the main floor onto the deck.

2.3 The ramp shall not extend past the front of the units into the main access aisle.

2.4 Floor Covering on ramp and elevated deck shall be Tennessee Department of Health or contractor provided and installed by a third party.

2.5 Finished floor and floor covering shall create a flush surface with the top of the track.

3. Carriage:

3.1 Carriages shall be minimum 1000 lbs. per linear carriage foot capacity, shall be constructed of steel or aluminum alloy and be bolted or welded. Bolted carriages shall use steel bolts and vibration-proof hardware. If carriages are bolted, there shall be no exposed bolt heads on the exposed carriage face.

3.2 Main supporting structural face sections shall provide some form of a shelf mounting recess or lip for positive shelving alignment and attachment and to prevent shelving from becoming dislodged off of carriage. Top mount shelving is unacceptable.

3.3 Each carriage shall drive all wheels on one side of the carriage with full length minimum 3/4" diameter solid steel or minimum 1 1/4" diameter tubular drive shaft or provide synchronized drive wheels driving both sides of the carriage.

3.4 Stationary platform construction shall be the same in materials, design and height as the movable carriage and shall be securely anchored to the tracks/floor underneath.

4. Wheels:

4.1 Wheels shall be guided by a convex, roller guide, flanged guide or V-design in track, and shall be designed to be compatible with the type of track used.

4.2 Wheels shall be constructed of solid steel, precision ground, balanced and hardened. All wheel bearings shall be permanently sealed, shielded and lubricated and have a minimum 3200 pound load rating.

4.3 Drive wheels shall be minimum 5" diameter.

5. Mechanical Assist Operation:

5.1 Each mobile carriage shall be equipped with a mechanical assist handle, which transmits power through a direct drive to the drive wheels. One pound of effort on the handle shall move a minimum of 4,000 pounds of carriage load.

5.2 No more than 6.8 complete turns of the handle shall be required to open a 36"W aisle.

5.3 The mechanical-assist system shall be completely enclosed behind an end panel to prevent tampering by unauthorized persons.

6. Mechanical Assist Safety System:

6.1 Each mechanical assist operator shall be equipped with a manually engaged safety lock device.

7. Face Panels:

7.1 All exposed ends of mobile carriages and stationary platforms shall have plastic laminate or steel face panels. Plastic laminate panels shall have a core of 3/4" 45 lb. density particle board. Color is to be selected by the owner/architect from manufacturer's standard finishes.

7.2 Panels shall cover the entire height and width of the shelving and carriage face.

7.3 Provide card holders and all other hardware for a complete installation.

SHELVING

"4-POST"/ "L&T" STYLE

Shelving:

LT-1: Five basic parts: uprights, shelves, shelf supports, shelf reinforcements and back/center stops which are assembled without bolts, sway braces, gussets, clamps, brackets, adapters, accessories, modifications and special tools of any kind.

LT-2: There shall be no holes on exposed surfaces, except that the shelves shall be slotted and punched for dividers and 2 holes for center stops.

LT-3: Shelves shall be adjustable on 1 ½" centers.

LT-4: Uprights shall be 88 ¼"H for all mobile shelving systems. Total mobile shelving system height shall be approximately 93 ¼ "H.

Uprights:

LTCU-1: Formed from two (2") wide 18 gauge cold rolled steel posts rolled into a double wall "T" formation (or "L" formation at row ends) with keyhole slots on 1 ½" centers on the inner wall only.

LTCU-2: There shall be no holes in the face of the post.

LTCU-3: Front and back posts shall be joined by welded 24 gauge closure sheet to give the required upright depth rigidity and base for erection.

LTOU-4: Open "T" upright shall be used as a common (intermediate) upright between units in most cases.

LTOU-5: See system component list for upright requirements.

Shelf:

SH-1: Formed of minimum 22 gauge cold rolled steel with ¾" flanges on all sides turned in front and back.

SH-2: Shelves adjustable on 1 ½" centers.

SH-3: Shelf may be slotted and punched to accept dividers and center stops.

SH-4: Top shelves shall be non - slotted.

SH-5: See system component list for shelf requirements.

Shelf Supports:

SS-1: Formed of 14 gauge steel for all 30"W and 36"W sections and 11 gauge steel for all 42"W and 48"W sections and shall provide two (2) shelf supports per shelf.

SS-2: Supports are to have double rivets except bottom supports on bottom shelf of all mobile systems, which will have single rivets, to eliminate gap between bottom shelf and top of carriage.

SS-3: See system component list for shelf support requirements.

Shelf Reinforcement:

SR-1: Shelf reinforcements shall be provided where one shelf is used for double entry or where single entry has a shelving depth which requires shelf reinforcements.

SR-2: See system component list for number of shelf reinforcement requirements.

Center Stops:

CS-1: Slotted center stops formed of 18 gauge steel with a formed channel at top and stiffener at bottom and slotted to accept dividers. Center stops to be used on double face shelving sections and are to be attached with bolts and nuts. One (1) per double face shelf, excluding top shelf, where required.

CS-2: See system component list for center stop requirements.

Back Stops:

BS-1: Slotted back stops shall be formed of 18 gauge steel and slotted to accept dividers. Back stops to be used on single face shelving sections. One (1) per single face shelf, excluding top shelf, where required.

BS-2: See system component list for back stop requirements.

Paint and Color:

TUP Shelving to have powder coat paint finish to resist abrasion and the color is to be selected by the owner/architect from manufacturer's standard finishes.

SYSTEM COMPONENTS LIST

Quantity	Description
184	Track/Rail, linear ft.
707	Elevated Plywood Decking, sq.ft.
44	Ramp, 18"D, linear ft.
1	10"D x 21 'L Stationary Platform
	24"D x 15'L Stationary Platform
8	24"D x 21 'L Mechanical Assist Carriage
6	20"D x 18'L Mechanical Assist Carriage
5	20"W x 96"H End Panel
9	24"W x 96"H End Panel
10	Shelving Upright, Closed Angle 20"W x 88.25"H
	Shelving Upright, Closed Angle 10"W x 88.25"H
18	Shelving Upright Closed Angle 24"w x 88.25"H
5	Shelving Upright, Open Tee 10"W x 88.25"H
	Shelving Upright Open Tee 20"W x 88.25"H
57	Shelving Upright, Open Tee 24"W x 88.25"H
108	Low Profile Shelf: Plain

10	Low Profile Shelf, Plain
60	Low Profile Shelf, Slotted
60	Low Profile Shelf: Slotted
240	42"W Shelf Support
40	42"W Shelf Support, Single Rivet
180	36"D Shelf Reinforcement
60	42"W Back Stop
60	42"W Center Stop

MECHANICAL SPECIFICATIONS

QTY	Unit of Measure	Color	Description	Unit Weight	Total Weight
30	EA		Cardholder, Steel w SS Decal	.50	15.00
6	EA		End stop – LP & Trail – DF and CF	1.7	10.20
184	FT		Rail – Low Profile Standard	5.00	920
			3 @ 40'0 13/16		
			1 @ 16'4 7/16"		
			1 @ 21'3 7/16"		
			1 @ 21'7 7/16"		
720	SF		Floor – L Rail	2.50	1800.00
44	FT		L Ramp	4	176.00
			1 @ 16'4 7/8"		
			1 @ 22'11 15/16"		
			1 @ 3'1 1/8"		
1	EA	TBD	Stationary Platform	191.00	191.00
			1 @ 24 1/16" x 15'0 1/8"		
6	EA	TBD	Line Shaft Mech Assist Carriage	330.00	1980.00
			6 @ 20 1/16" x 18'0 1/8"		
1	EA	TBD	Line Shaft Mech Assist Carriage	330.00	330.00
			1 @ 20 1/16" x 18'0 1/8"		
8	EA	TBD	Line Shaft Mech Assist Carriage	400.00	3,200.00
			8 @ 24 1/16" x 21'0 1/8"	0.00	0.00
			Wheel Assembly (Adder/Deduct)		
14	EA		Anti-Tip Overhead	10.0	140.00
1	EA	TBD	LPLF Panel	64.00	64.00
			1 @ 19 15/16" x 93 1/2"		
14	EA	TBD	LPLF Premium Panel	64	896
			6 @ 19 15/16" x 93 1/2"		
			8 @ 23 15/16" x 93 1/2"		

4 Post and Case

14	EA	TBD	Upright, 4 Post, Closed Angle 20D x 88.25H	23.50	329.00
18	EA	TBD	Upright, 4 Post, Closed Angle, 24D x 88.25H	26.25	472.50
35	EA	TBD	Upright, 4 Post, Closed Tee, 20D x 88.25H	27.50	962.50
52	EA	TBD	Upright, 4 Post, Closed Tee, 24D x 88.25H	30	1560.00
366	EA	TBD	Plain Shelf, 4 Post, Double- Face, 36W x 20D x 0.75H	7.00	2562.00
60	EA	TBD	Plain Shelf, 4 Post, Double- Face, 36 W x 24D x 0.75H	8.25	495.00
1	EA	TBD	Plain Shelf, 4 Post, Double- Face, 36 W x 24D x 0.75H	8.25	8.25
420	EA	TBD	Slotted Shelf, 4 Post, Double- Face, 36 W x 24D x 0.75H	8.25	3465.00
6	EA	TBD	Slotted Shelf, 4 Post, Double- Face, 36 W x 24D x 0.75H	8.25	49.50
216	EA	TBD	SHELF SUPPORTS	2.58	557.28
36	EA	TBD	SHELF SUPPORT W/ EARS CUT OFF	2.58	92.88
1272	EA	TBD	SHELF SUPPORT	1.75	2226.00
12	EA	TBD	SHELF SUPPORT	1.75	21.00
168	EA	TBD	SHELF SUPPORT W EARS CUT OFF	1.75	294.00
2	EA	TBD	SHELF SUPPORT W EARS CUT OFF	1.75	3.50
282	EA	TBD	SHELF REINFORCEMENT	1.00	282.00
42	EA	TBD	SHELF REINFORCEMENT	1.25	52.50
360	EA	TBD	SHELF REINFORCEMENT	1.25	450.00
5	EA	TBD	SHELF REINFORCEMENT	1.25	6.25
60	EA	TBD	SHELF REINFORCEMENT	1.5	90.00
1	EA	TBD	SHELF REINFORCEMENT	1.5	1.50
420	EA	TBD	Center Stop, 4 Post/Case, Standard, 36W x 4.75H	3.25	1365.00
6	EA	TBD	Center Stop, 4 Post/Case, Standard, 36W x 4.75H	3.25	19.50
1680	EA	TBD	FILE DIVIDER	1	1680.00
24	EA	TBD	FILE DIVIDER	1	24.00
1	EA	TBD	Free of Charge Paint Spray Can	.5	.50
1	EA	TBD	Free of Charge Paint Spray Can	.5	.50

STATIC SHELVING

2	EA	TBD	Upright, 4 Post, Closed Angle 12D x 88.25H	18.00	36.00
4	EA	TBD	Upright, 4 Post, Closed Tee 12D x 88.25H	22.00	88.00
1	EA	TBD	Plain Shelf, 4 Post, Single- Face, 36W x 12D x 0.75H	4.29	4.29
4	EA	TBD	Plain Shelf, 4 Post, Single- Face, 48W x 12D x 0.75H	5.69	22.76
6	EA	TBD	Slotted Shelf, 4 Post, Single- Face, 36W x 12D x 0.75H	4.50	27.00
24	EA	TBD	Slotted Shelf, 4 Post, Single- Face, 48W x 12D x 0.75H	6.0	144.00
14	EA	TBD	SHELF SUPPORT	1.75	24.50
56	EA	TBD	SHELF SUPPORT	3.75	210.00
6	EA	TBD	Back Stop, 4 Post/Case, Standard, Slotted, 36W x 2.5H	1.75	10.50
24	EA	TBD	Back Stop, 4 Post/Case, Standard, Slotted, 48W x 2.5H	2.25	54.00
60	EA	TBD	FILE DIVIDER	1.00	60.00
1	EA	TBD	FRONT BASE	1.50	1.50
4	EA	TBD	FRONT BASE	1.75	7.00
6	EA	TBD	UPRIGHT WALL ANCHOR	0.75	4.50